

Emotion Detector

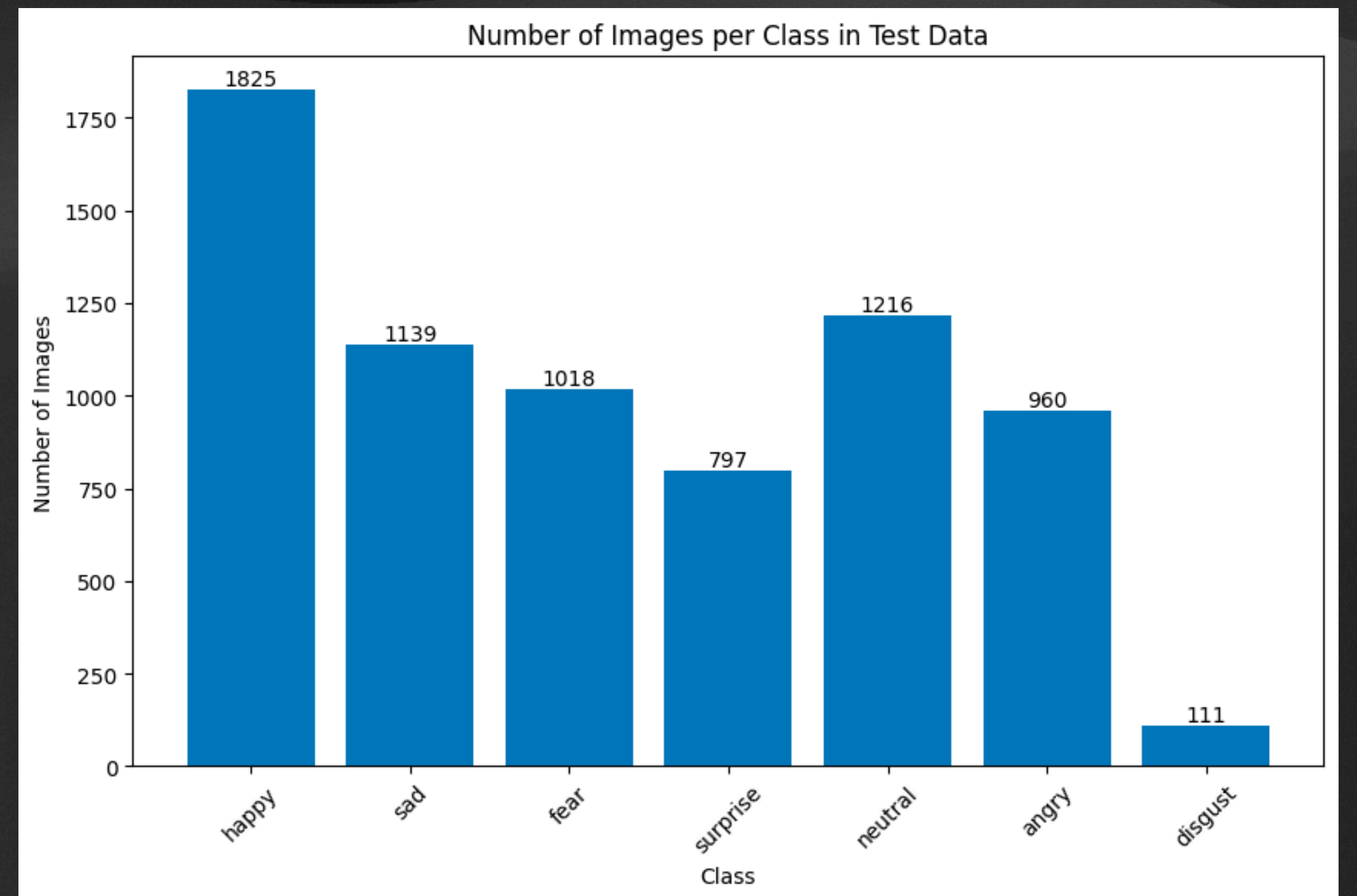
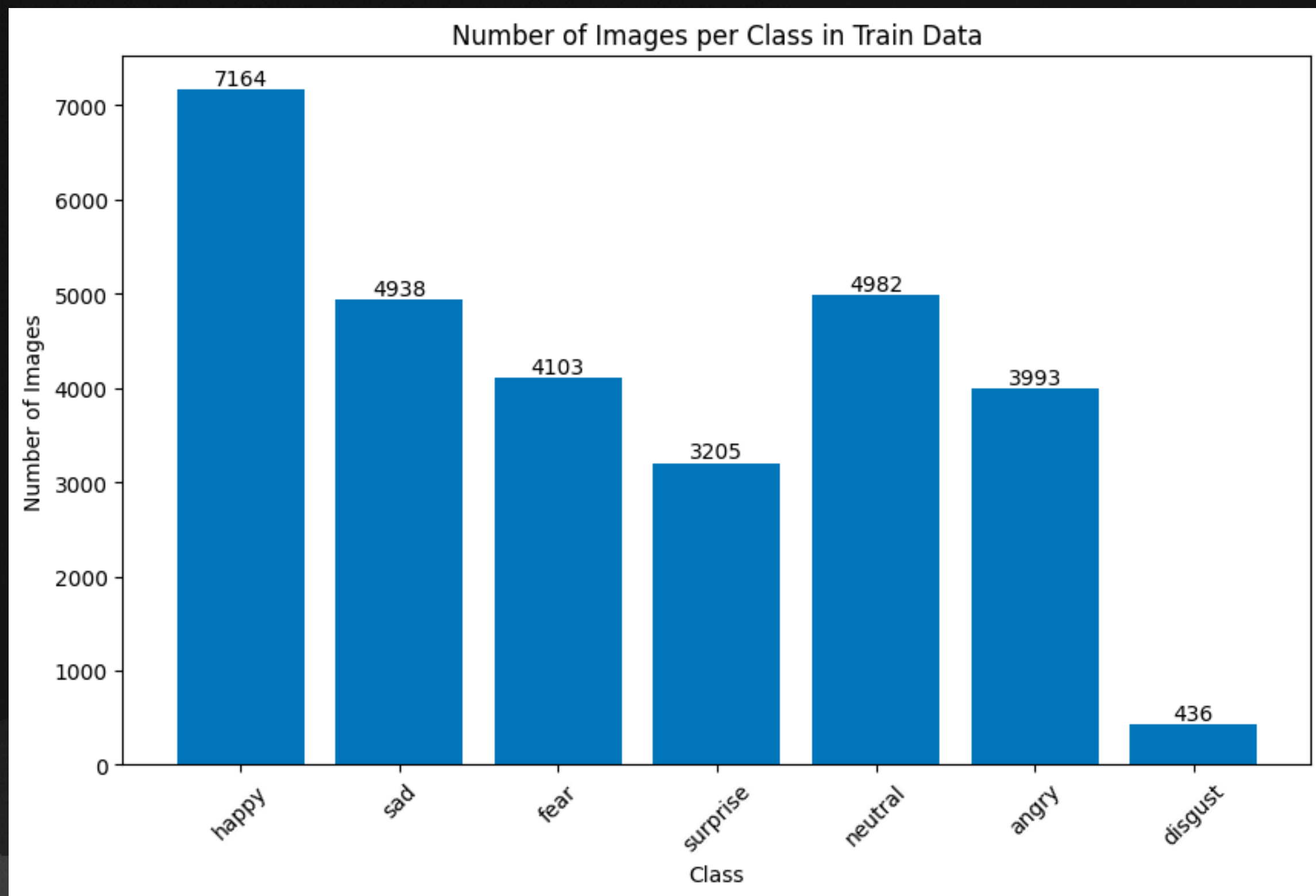
Image Processing and Computer Vision

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Dataset

FER2013 (Facial Expression Recognition 2013)

- A total of 7 emotions/classes: Neutral (6,198), Angry (4,953), Fear (5,121), Surprise (4,002), Disgust (547), Happy (8,989), and Sad (6,077)
- Training set: 28,866 examples
- Validation set: 7,066 examples



Methods used

- Resampling (oversampling)
- Random rotation
- Random zooming
- Rescaling

In total, 4 models were created

Model 1

Nothing applied

Model 2

Random rotation (range of 30°)
added

Random zooming (range of 0.1)
added

Model 3

Oversampling added

Model 4

Oversampling added

Random rotation (range of 30°)
added

Random zooming (range of 0.1)
added

Results

Model	Details	Validation Accuracy
Model 1	Original	0.629 or 62.9%
Model 2	Rotation and zooming	0.647 or 64.7%
Model 3	Oversampling	0.625 or 62.5%
Model 4	Oversampling + rotation and zooming	0.641 or 64.1%

<https://emotion-detector-nicholas.streamlit.app/>

